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Washington, DC 20554

Federal Communications Commission
Office of the Secretary

In the Matter of)	
)	
Telephone Number Requirements for IP-Enabled Services Providers)	WC Docket No. 07-243
)	
Local Number Portability Porting Interval And Validation Requirements)	WC Docket No. 07-244
)	
IP-Enabled Services)	WC Docket No. 04-36
)	
Telephone Number Portability)	CC Docket No. 95-116
)	
CTIA Petitions for Declaratory Ruling on Wireline-Wireless Porting Issues)	
)	
Final Regulatory Flexibility Analysis)	
)	
Numbering Resource Optimization)	CC Docket No. 99-200

REPLY COMMENTS OF TELECOMMUNICATION SYSTEMS, INC.

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**REPLY COMMENTS
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TELECOMMUNICATION SYSTEMS, INC.**

TeleCommunication Systems, Inc. ("TCS") hereby submits these reply comments in response to the Notice of Proposed Rulemaking released by the Federal Communications Commission ("Commission" or "FCC") in the above-referenced proceeding.¹ In the Notice the Commission asked, *inter alia*, for "comment on any other issues associated with the implementation of LNP for users of interconnected VoIP services."² In these reply comments TCS urges the FCC to grant TCS' Petition, filed in CC Docket 99-200, seeking a waiver of Section 52.15(g)(2)(i) of the Commission's Rules³ so that TCS as a VoIP Positioning Center service provider ("VPC") is deemed to be an eligible user of and may obtain Emergency Service Query Keys ("ESQKs") without having to demonstrate that it has been "...licensed or certified by the FCC or a state commission to operate as a telecommunications carrier..."⁴ It is necessary for the FCC to act now because otherwise the Commission will leave unresolved an issue which

¹ *Telephone Number Requirements for IP-Enabled Services Providers*, WC Docket Nos. 07-243, 07-244, & 04-36, CC Docket Nos. 95-116 & 99-200, Report and Order, Declaratory Ruling, Order on Remand, and Notice of Proposed Rulemaking, 22 FCC Rcd 19531 (2007). As used herein, the term "*Porting Order*" shall refer to the Report and Order, Declaratory Ruling, and Order on Remand, and the term "*Notice*" shall refer to the Notice of Proposed Rulemaking.

² *Id.* at ¶53.

³ *Petition of TeleCommunication Systems, Inc. and HBF Group, Inc. for Waiver of Part 52 of the Commission Rules*, CC Docket No. 99-200 (filed February 20, 2007) ("Waiver Petition"). Section 52.15(g)(2)(i) provides in relevant part that an applicant for initial numbering resources must provide evidence that it "is authorized to provide service in the area for which the numbering resources are being requested." TCS seeks a waiver of this requirement to the extent that its application would require TCS to obtain certification as a condition of eligibility for utilization of ESQKs. TCS is not seeking a waiver of the remainder of part 52.

⁴ See Letter dated September 8, 2006 from Thomas J. Navin, Chief, Wireline Competition Bureau to Thomas M. Koutsy, Chair North American Numbering Council and Amy L. Putnam, Director, Number Pooling Services NeuStar, Inc. ("NeuStar") (hereinafter referred to as the "Navin Letter").

would negatively impact upon public safety by hindering the ability of interconnected nomadic VoIP carriers to offer full E911 capabilities for all ported numbers.

Introduction And Summary

TCS is one of the primary providers of VPC service and in this capacity provides location information for E911 calls for over 100 million subscribers of wireless and VoIP service providers. In so doing, TCS handles over 110,000 E911 call per day. VPC service of the type provided by TCS is critical to the ability of interconnected VoIP service providers to comply with the Commission's requirement that they supply 911 capabilities to their customers. In order to provide this service, VPCs such as TCS must have access to ESQs. Unfortunately, by letter dated September 8, 2006 from Thomas J. Navin, Chief, Wireline Competition Bureau to the North American Numbering Council and NeuStar, Inc., Mr. Navin indicated that VPCs seeking ESQs from NeuStar must be licensed or certified by the FCC or a state commission consistent with Part 52 of the Commission's Rules.⁵

The Commission has in various instances recognized a "bright line" between both the privileges of and obligations imposed upon an entity deemed a telecommunications carrier and those applicable to a non-certificated entity. At the same time, however, as was recognized in the Navin Letter, the Commission also has a parallel tradition of granting waivers where appropriate. Specifically, the Commission may waive its rules for good cause⁶ and where strict application of a rule would be contrary to the public

⁵ Navin Letter at 3.

⁶ 47 C.F.R. § 1.3; see also *Administration of the North American Numbering Plan*, CC Docket No. 99-200, Order 20 FCC Rcd 2957, ¶ 4 (*SBCIS Numbering Waiver Order*), citing to *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969), cert. denied, 409 U.S. 1027 (1972) ("*WAIT Radio*").

interest.⁷ In determining whether to grant a waiver, the Commission may consider hardship, equity, or the fact that a more effective implementation of public policy will attend the granting of the waiver.⁸

To date, one of the privileges that, absent a waiver, has been limited to entities with carrier status is access to numbering resources.⁹ However, as was implicitly acknowledged in the Navin Letter,¹⁰ Pseudo Automatic Number Identification ("p-ANI" which also include "ESQKs") resources fall into a gray area; so much so, that the Bureau Chief believed it necessary to provide clarification for NeuStar regarding the management of p-ANI / ESQKs. Moreover, in so doing the Bureau indicated that the Commission is prepared to waive the aforementioned certification requirement upon a showing that applicable state and local emergency service fees were paid and appropriate universal services fund ("USF") contributions were satisfied.¹¹ Given that ESQK / p-ANI resource are indispensable to TCS's VPC business model, TCS subsequently filed its Waiver Petition requesting that the FCC waive the rule as outlined in the Navin Letter.

It is both appropriate and necessary for the FCC to address the issue of VPC access to ESQKs in this portion of this combined proceeding.¹² As previously noted, the Commission has specifically sought comment "on any other issues associated with the implementation of LNP for users of interconnected VoIP services."¹³ The *Porting Order*

⁷ *SBCIS Numbering Waiver Order* ¶ 4.; see also *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) ("*Northeast Cellular*").

⁸ 6 *WAIT Radio*, 418 F.2d at 1159; *Northeast Cellular*, 897 F.2d at 1166.

⁹ See *Porting Order* ¶ 20.

¹⁰ The letter describes p-ANI as "...consisting of the same number of digits as...ANI, that is *not* a North American Numbering Plan (NANP) telephone directory number and be used in place of ANI . . ." Navin Letter at 1 footnote 1.

¹¹ *Id.* at 3.

¹² TCS' Petition was assigned to CC Docket No. 99-200, one of the dockets included in this combined proceeding.

¹³ *Porting Order* ¶53.

represents a continuation of the FCC's attempt to ensure that users of interconnected VoIP services have access to the same types of capabilities that other users have because "consumers' expectations for these [interconnected VoIP] services trend toward their expectations for other telephone services."¹⁴ This effort began when the FCC required interconnected VoIP providers to supply 911 emergency calling capabilities.¹⁵ Adequate number portability cannot be assured if questions remain regarding access to E911 capability;¹⁶ likewise interconnected nomadic VoIP Service Providers cannot be sure that the FCC's E911 requirements can be met in all cases unless VPCs have access to ESQs. The inability of VPCs to do so represents a potential threat to public safety that must be addressed.

I. **VPC Service Is Critical If Interconnected Nomadic VoIP Service Providers Are To Have E911 Capability**

TCS is one of the two primary providers of VPC services which provide 99% of all call routing instructions to interconnected nomadic VoIP service providers and ALI data delivery to Public Safety Answering Points ("PSAPs"). ESQs are critical components of VPC technology. One of the main purposes of a VPC is to provide call routing instructions to the VoIP service provider's softswitch so that E911 calls can be routed to the appropriate PSAP. The means by which the correct PSAP is communicated from the VPC to the softswitch is through the use of ESQs. Each ESQ represents a different PSAP. Currently, VPCs obtain ESQs without restriction, and "pool" them to

¹⁴ *Id.* ¶11.

¹⁵ *Id.* ¶53.

¹⁶ This position also finds support in the Comments of Comcast Corporation, filed herein in response to the Notice, where it argues, albeit on a different matter, that the Commission should take steps to ensure that consumers do not lose access to E911 during the porting process. See Comments of Comcast at 18.

be shared by multiple VPC soft switches. Typically, approximately ten ESQKs are assigned per PSAP, so that ten different calls from a variety of interconnected VoIP service providers can be processed simultaneously. Without access to ESQKs, the VPCs will be obligated to use ESQKs provided by the VoIP service providers.

Today, VPCs obtain ESQKs via two primary methods. In most areas of the country, the ILEC has assumed the responsibility for managing the assignment of ESQKs and the VPCs obtain ESQKs from it. In other areas, the ILEC has eschewed management of ESQKs. In those localities, the existing VPCs formed a consortium to self-assign and jointly manage ESQKs and have continued to do so as a recognized existing issuing authority. Subsequently, the FCC created the Interim Routing Number Authority (IRNA) and empowered NeuStar to operate it subject to various FCC conditions, including those set forth in the Navin Letter, and NANC rules.

Grant of the proposed waiver will not have a limiting effect on numbering resources because the ESQKs are "non-dialable" numbers and should not really be considered numbering resources.¹⁷ TCS does not provide voice or other end-user telephone-type services. Instead, TCS provides VPC service based on the NENA i2 Model pursuant to which it neither provides the voice path nor interconnects with the PSTN.

Moreover, the VPC approach can play a more general role with regard to LNP. In its comments, the National Emergency Number Association ("NENA") encouraged the FCC "to consider the use of the VoIP Positioning Center ("VPC") solution in place today

¹⁷ For example, no reporting is required for ESQKs because the FCC has held that since the category of "available numbers" is a "residual category," carriers were not required to report such numbers. *See Report and Order and Further Notice of Proposed Rulemaking, In the Matter of Numbering Resource Optimization*, CC Docket No. 99-200. 15 FCC Rcd 7574, 7600 n. 99 (2000).

for VoIP customers for 9-1-1 routing” and as a means to “help resolve the routing issue that all N11/800-type services face today.”¹⁸

II. There Is No Need To Apply Part 52’s Certification Requirement To VPCs

There is no basis for applying the provisions of 47 C.F.R. § 52.15(g)(2)(i) as a pre-condition for ESQK eligibility as was done in the Navin Letter. The state certification requirement upon which Mr. Navin relied was designed to address the question of how CLECs should obtain numbering resources—which is not at issue here.

Although States do have an interest in ESQK utilization, state certification is not required to address the states’ concerns. CLEC state certification procedures, while appropriate for true “numbering resources” for the PSTN and to provide a legal basis for the negotiation of Interconnection Agreements, are not designed to determine the suitability of a VPC. The state CLEC certification process also often contemplates the filing and approval of a retail tariff, for end-user customers, and/or a wholesale tariff, for use by other carriers. This tariff process is not suitable for a VPC.

VPC state certification in fifty-one jurisdictions is impossible due to CLEC regulations in some states that prohibit certification for entities such as VPCs that do not provide dial tone to retail customers, do not have retail tariffs, and other state specific requirements.¹⁹ In the alternative, interconnected nomadic VoIP service providers

¹⁸ Comments of NENA at 7. For its part, the National Association of Regulatory Utility Commissioners (“NARUC”) suggests that non-certificated service providers could be given access to numbering resources under proper circumstances. Comments of the National Association of Regulatory Utility Commissioners at 10. In such a circumstance, it would make no sense to grant PSTN numbering resources to non-CLEC certified VoIP providers and to deny ESQKs to non-certificated VPCs such as TCS.

¹⁹ In fact, the Bureau’s recent Recommended Decision in the *Bright House* proceeding would lead to the conclusion that VPC service is neither “telecommunications” nor “telecommunications service.”

themselves would be forced to become certificated in all jurisdictions—a task which at a minimum would delay VoIP E911 deployment and strain ESQK resources.

As recent history demonstrates, those VPCs that have attempted to gain CLEC certification have met with mixed results because various jurisdictions have taken conflicting good faith positions (based on differing state laws and regulations) regarding VPC certification. For example, the Public Utilities Commission of Ohio (“PUCO”) refused to certify the VPC Intrado Communications Inc., as a CLEC on the ground that “its telephone exchange activities are restricted in scope and, thus, do not extend to the level of a CLEC.”²⁰ Instead the PUCO established a new designation known as a “competitive emergency services telecommunications carrier.”²¹ In Virginia, Intrado has had difficulty negotiating an interconnection agreement because Embarq does not recognize it as a “carrier” and, as a result, Intrado has had to file a petition with the FCC seeking to arbitrate the issue.²²

In TCS’ case, state certification would add little. TCS is a public company which has demonstrated the required level of integrity and has obtained CLEC registration in at least one state. Moreover, it already provides nationwide VPC service. TCS’ VPC service does not require the typical type of interconnection. It is provided from several locations, and is interstate in nature. Consequently, to the extent that any review of a VPC’s qualifications is appropriate, it should be done at the federal level and not on a state-by state basis. TCS does agree, however, with NARUC’s concerns regarding the

Recommended Decision, *In the Matter of Bright House Networks, LLC et al., v. Verizon California, Inc., et al.*, ¶¶ 12-13, DA 08-860 (April 11, 2008).

²⁰ Finding and Order, *In the Matter of the Application of Intrado Communications, Inc. to Provide Competitive Local Exchange Services in the State of Ohio*, ¶7 Public Utilities Commission of Ohio, Case No. 07-1199-TP-ACE (Feb. 8, 2008).

²¹ *Id.*

²² Petition of Intrado Communications of Virginia Inc., *In the Matter of Petition of Intrado Communications of Virginia Inc.*, WC 08-33 (filed March 6, 2008).

need for resource recipients to comply with the reporting requirements of the Part 52 numbering rules and commits to complying with all applicable reporting requirements.²³

III. The Application Of Part 52's Certification Requirement Would Place A Strain On Numbering Resources, Result In A Delay In VoIP Deployment And Negatively Impact Upon Public Safety

At present, TCS has been able to self-administer a sufficient number of ESQKs to meet the E911 requirements of its clients. In the long run, however TCS might not be able to acquire and manage ESQKs for shared use among its interconnected nomadic VoIP service provider customers. The negative consequences and disruption to the emergency service capabilities of VoIP providers would be significant if this were to occur. Interconnected nomadic VoIP service providers would be required to immediately seek certification in all fifty-one jurisdictions and obtain their own ESQKs. This would create confusion and delay VoIP E911 deployment. It would potentially exhaust the reservoir of assignable ESQKs and would be contrary to NENA recommendations. Moreover, it would require each PSAP to test with dozens (or hundreds) of interconnected nomadic VoIP service providers that might never actually use the ESQKs assigned to them.

These concerns are not inconsequential. Although it is impossible to address the question of the impact of VPCs on number conservation with complete precision, TCS' concerns are based on the following estimates which it believes are sound:

²³ See NARUC Comments at 10.

1. For the purpose of this analysis TCS has assumed that there are approximately 1,300 interconnected nomadic VoIP service providers²⁴ and 6,100 PSAPs nationwide.²⁵
2. Based on industry practice TCS estimates that at least 2 ESQKs would be required by every interconnected nomadic VoIP service provider to deploy to every PSAP in order to manage E911 calls.
3. Therefore, without VPCs to aggregate ESQKs, nomadic interconnected VoIP service providers would need up to 15,860,000 ESQKs ($1300 \times 6,100 \times 2$) to deploy to all PSAPs.²⁶
4. In contrast, a VPC is typically assigned 10 ESQKs per PSAP so that 10 different calls from a variety of VoIP providers can be processed simultaneously. Consequently, 2 VPCs would need only 122,000 ESQKs to deploy to all PSAPs ($2 \times 10 \times 6100$).

As these estimates demonstrate, TCS believes the number conservation benefits involving the use of 122,000 ESQKs versus the use of almost 16 million ESQKs are clear.

The public safety benefits of using VPCs as ESQK aggregators are also evident.

On an average day, TCS routes over 100,000 E911 calls without difficulty. The

²⁴ For various reasons, it is impossible to develop a completely accurate count of the number of interconnected VoIP service providers. For example, according to Packetizer "with all of the VoIP providers popping up all over the world these days, we gave up trying to compile a complete list of all those companies ourselves—there are just too many! By some estimates, there are more than 2000 companies that can rightly claim to be VoIP service providers."

http://www.packetizer.com/ipmc/service_providers.html

²⁵ According to NENA's 9-1-1 Fast Facts there are 6083 primary and secondary PSAPs.

<http://www.nena.org/pages/Content.asp?CID=144&CTID=2>

²⁶ To give some sense of perspective, the recent March 2008 FCC Report entitled "*Numbering Resource Utilization in the United States*" notes that carriers filing FCC Forms 502 reported that only 627 million telephone numbers have been assigned to end users. In this context the figure of 16 million ESQKs is significant.

disruption, confusion, and even danger to our national E911 system that would be involved in forcing over 1,300 interconnected nomadic VoIP service providers to obtain, test, and maintain 16 million ESQs argues powerfully in favor of TCS' simple and easily granted Waiver request.

The negative impact that the Commission's position could have was recently recognized by The Association of Public-Safety Communications Officials-International ("APCO") in a Position Statement it posted on April 16, 2008. APCO indicated in part:

APCO International is concerned that some providers of VoIP Position Centers (VPC) may have to discontinue services to VoIP Service Providers (VSP) if they are denied access to pseudo Automatic Number Identification (p-ANI) codes.

APCO International respectfully requests that the Federal Communications Commission (Commission) fully examine the impact of a decision to deny VPC access to p-ANI codes and its affect on the ability of public safety answering points (PSAP) to locate VoIP 9-1-1 callers using current VPC services.

APCO International believes that if VPCs are forced to discontinue services to VSPs VoIP consumers may be at risk when calling 9-1-1.²⁷

TCS believes that APCO is justified in its concern that consumers may be at risk if VPCs are forced to discontinue (or are unable to begin to offer) E911 services to VoIP service providers. It is imperative that the Commission act in the affirmative on the Petition.

IV. TCS' Waiver Meets The Conditions Set Forth In The Navin Letter

TCS is in compliance with the Navin Letter's waiver conditions. It is a public company subject to multiple levels of financial and managerial regulatory oversight by

²⁷ TCS and HBF Petition to Waive Part 52 of Commission Rules Position Statement, APCO Government Affairs <http://www.apcointl.org/new/government/positionstatements.php> (April 16, 2008)

state and federal authorities. As a member of all national public service organizations²⁸, it maintains its VPC operations to the highest industry standards in compliance with continuing membership standards of these emergency services organizations. TCS pays all relevant emergency service fees regarding its operations, and its customers subject to USF remit per requirements applied to them. Therefore, TCS satisfies the waiver conditions foreseen in the Navin Letter and should be accordingly eligible to receive p-ANI resources.

V. **If State CLEC Certification is Required, Obtaining One State Certification Should be Adequate for a Waiver**

TCS has obtained CLEC certification in Florida, Tennessee, Texas and Washington. However, as noted above, TCS is confident that universal CLEC certification is not achievable. Nonetheless, for purposes of a waiver petition, the Commission may hold that CLEC certification in one state is adequate for satisfaction of the policy outlined in the Navin Letter. TCS's Waiver Petition under such a scheme should be granted.

VI. **If Certification Of Some Form Is Necessary To Justify A Waiver, It Should Be From The FCC Or A National Public Safety Organization**

As explained above, CLEC certification is not the appropriate means by which to determine the financial, technical, and or operational readiness of a VPC, and many jurisdictions reject this responsibility. As an alternative, the FCC could establish a

²⁸ TCS is a member of NENA, APCO, ComCARE, EENA, ESIF, and the E911 Institute as well as other relevant organizations - <http://www1.telecomsys.com/about/memberships/index.cfm>

simple waiver application process. This would permit the FCC to monitor VPCs and help preserve the integrity of the VPC emergency services marketplace.

As an alternative, some national emergency organizations have discussed the establishment of national registration or qualification programs. As either a supplement to or in lieu of, FCC registration, sanction by a relevant national public safety organization would serve as a reasonable alternative to individual state CLEC certifications. If the Commission should decide that either of these proposals is appropriate, it should take into account TCS's existing ongoing public safety responsibilities and grant TCS a temporary waiver for unrestricted access to p-ANI resources pending TCS's qualification pursuant to a new waiver qualification scheme.

VII. The TCS Waiver Petition Is Unique And Should Be Acted Upon

TCS' waiver petition is unique and should be acted upon by the Commission. The fact that the FCC did not address other waiver petitions in this proceeding²⁹ should not preclude the Commission from addressing TCS' Waiver Petition. Likewise, the FCC should not be deterred by the fact that VPCs do not contribute to the universal service mechanism.

TCS' Waiver Petition is materially different from the other petitions because the company is not seeking telephone numbers in order to provide voice service. Moreover, if granted, the waiver would reduce the demand for p-ANI numbering resources (as they are classified today) while at the same time promote public safety and encourage the continued growth of interconnected VoIP services. In its petition, Qwest Communications Corporation, acting on behalf of its IP-enabled Services Operations

²⁹ See *Porting Order* ¶20.

("QCC/IPES), has sought a waiver of Section 52.15(g)(2)(i) in order to obtain telephone numbers that QCC/IPES could use in providing VoIP services on a commercial basis to residential, governmental, educational and business customers³⁰ similar to the relief granted SBCIS.³¹

In contrast, TCS is not seeking traditional numbering resources in order to provide commercial telephone service to end users. Therefore, as noted previously, grant of TCS' request would in no way undercut the traditional distinctions that the Commission has drawn between the rights and obligations of carriers versus those of non-carriers in connection with the provision of telecommunications and other interconnected end user services.

The fact that VPCs do not contribute directly to the universal service support mechanism should also not affect the outcome here. VPCs do not provide the type of service which is typically subject to the universal service requirement.³² Moreover, since both TCS' wireless and interconnected VoIP service provider customers are required to contribute, the grant of the proposed waiver will not impact upon universal service revenues.³³

Conclusion

In summary, the FCC should address the Waiver Petition filed by TCS because both the FCC's E911 and LNP efforts might be frustrated if interconnected nomadic VoIP service providers are not able to provide E911 capability for ported numbers

³⁰ Qwest Communications Corporation *Petition for Limited Waiver of Section 52.15(g)(2)(i) of the Commission's Rules Regarding Numbering Resources*, (filed March 28, 2005).

³¹ *Porting Order* at 20.

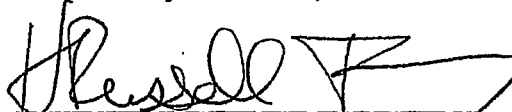
³² See 47 CFR § 54.706.

³³ If TCS were a carrier, which it is not, the revenues that it received would arguably be exempt as "revenues from resellers" in that the revenues would be derived and from services provided to other entities that were contributors to universal service support mechanisms and in essence resold.

because TCS was unable to obtain ESQs, and the continued deployment of interconnected VoIP service might be delayed. The facts demonstrate that there is no need to change the current self-administration process because it works seamlessly. Moreover, TCS is certified in at least one state. Therefore it would be appropriate for the FCC to waive the provisions of Section 52.15(g)(2)(i) so that TCS is deemed to be an eligible user of ESQs in all jurisdictions regardless of certification and is thereby eligible to receive numbering resources.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "H. Russell Frisby, Jr.", written over a horizontal line.

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CERTIFICATE OF SERVICE

I hereby certify that a copy of TeleCommunication Systems, Inc. Comments were served this 21st day of April 2008 by electronic filing and e-mail to the persons listed below.



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